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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,995	03/26/2004	Mi-Sook Nam	10125/4138	8489

7590 03/29/2006

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EXAMINER
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TON, MINH TOAN T

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 03/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/809,995	NAM ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Toan Ton	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 18-26, 28-30, 36-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-26, 28-30, 36, 37 and 1819 is/are rejected.
- 7) ☒ Claim(s) 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Claim Objections***

1. Claim 20 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 18 recites the pixel electrode formed on the reflective layer, whereas claim 20 recites the reflective layer formed on the pixel electrode.

Claims 24-25 are objected to because of the following informalities: “according to claim 18” should be changed to --according to claim 19—(since claims 24-25 recite “the second passivation layer”. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 18, 21, 23, 27-30 and 37 are rejected under 35 U.S.C. 102(e) as being anticipated by Murai et al (US 2005/0213005).

Murai discloses a fabricating method of an array substrate for a transfective liquid crystal display device comprising (see at least Figures 4-17): forming a gate line and a data line

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on a substrate, the gate line and the data line crossing each other to define a pixel region having reflective and transmissive portions; forming a thin film transistor connected to the gate line and the data line; forming a first passivation layer on the thin film transistor, the first passivation layer having at least one protrusion in the reflective portion; forming an uneven reflective layer (e.g., 8a) on the first passivation layer in the reflective portion that has unevenness at least in part due to the at least one protrusion; and forming a pixel electrode (e.g., 9a) on the first passivation layer; providing a second substrate having a color filter layer (e.g., 24), each color of the color filter layer having regions corresponding in dimension and arrangement to the reflective and transmissive portions of a pixel region, the second substrate further comprising an overcoat layer (e.g. 25) on the color filter layer, a surface of the overcoat layer having a recess portion in the transmissive region; a common electrode (21) on the surface of the overcoat layer; and disposing the first substrate such that reflective and transmissive portions of the first substrate oppose the corresponding regions of the second substrate.

Murai discloses the method comprising the reflective layer including one of aluminum and aluminum alloy (see at least col. 3, [068]).

Murai discloses the first passivation layer (e.g., 7a) comprising resin.

Murai discloses thickness' characteristics in the liquid crystal layer in the transmissive and in reflective portions (see at least Figures 4-17).

portion such that no protrusions are formed in the transmissive portion (see at least Figure 11D).

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 19, 22, 24-26 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murai as applied to claims 18, 21, 23, 27-30 and 37 above.

The use of a passivation layer between the pixel electrode and the reflective layer is common and known in the art, wherein materials such as inorganic insulator (e.g., SiO) and organic insulator (e.g., BCB, resin) for achieving advantages such as minimizing oxidation to the reflective layer. Therefore, it would have been at least obvious to one of ordinary skill in the art at the time the invention was made to employ a passivation layer (e.g., organic, inorganic insulator) between the pixel electrode and the reflective layer for achieving advantages such as minimizing oxidation to the reflective layer. Further, the contact hole through insulating layers is required so that the pixel electrode makes contact with the thin film transistor.

***Response to Arguments***

3. Applicant's arguments with respect to the pending claims have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

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4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

***Contact Information***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan Ton whose telephone number is (571) 272-2303.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

March 20, 2006

  
**PRIMARY EXAMINER**